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1. One v/s All

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```
 \begin{array}{l} \text{Blue (+1) v/s All (-1)}: \overline{w}.\overline{x}_{test}+b=0.8 \\ \text{Yellow (+1) v/s All (-1)}: \overline{w}.\overline{x}_{test}+b=0.6 \\ \text{Red (+1) v/s All (-1)}: \overline{w}.\overline{x}_{test}+b=-0.2 \end{array} \right\} \text{argmax = Blue}
```

1. One v/s One

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One v/s One
Blue v/s Yellow → Blue

- 1. One v/s One
  - 1 Blue v/s Yellow → Blue
  - 2 Yellow v/s Red  $\rightarrow$  Red

- 1. One v/s One
  - 1 Blue v/s Yellow → Blue
  - 2 Yellow v/s Red → Red
  - 3 Red v/s Blue → Blue

## **Support Vector Regression**

Hard Margin or  $\epsilon$ -SVR  $\hat{y}(x) = \overline{w}.\overline{x} + b$